

REPORT ON MACHINERY.

No. 5465 (Received at London Office 7/7/82)
 No. in Survey held at Dumbarton Date, first Survey 29.12.81 Last Survey 4.4.82
 Reg. Book. S.S. "Kainarapa" Tons 1682
 on the S.S. "Kainarapa" Master W. H. Chatfield Built at W. Denny & Co. When built 1882
 Engines made at Dumbarton By whom made Denny & Co. when made 1882
 Boilers made at " By whom made " when made 1882
 Registered Horse Power 292 Owners Union Co. New Zealand Port belonging to Dunedin

ENGINES, &c.—

Description of Engines Compound Inverted Direct Acting
 Diameter of Cylinders 41" 7/10" Length of Stroke 48" No. of Rev. per minute 65 Point of Cut off, High Pressure 1/10 Low Pressure 1/10
 Diameter of Screw shaft 12 3/4" Diameter of Tunnel shaft 11 1/4" Diameter of Crank shaft journals 13" Diameter of Crank pin 13" size of Crank webs 8 1/2" x 16 1/2"
 Diameter of screw 14" 6" Pitch of screw 20" 6" No. of blades 4 state whether moveable yes total surface 56" 4"
 No. of Feed pumps 2 diameter of ditto 4 1/2" Stroke 24 1/4" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 diameter of ditto 4 1/2" Stroke 24 1/4" Can one be overhauled while the other is at work yes
 Where do they pump from All Compartments.
 No. of Donkey Engines one. Size of Pumps 8" C. A. P. 9 Stroke Where do they pump from Sea, Hold, & Room
Bilges Separately and from All Compartments.
 Are all the bilge suction pipes fitted with roses yes Are the roses always accessible yes Are the sluices on Engine room bulkheads always accessible yes
 No. of bilge injections one. and sizes 5" Are they connected to condenser, or to circulating pump Circulating pump.
 How are the pumps worked by eccentrics on Crankshaft.
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both.
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes Are the discharge pipes above or below the deep water line above
 Are they each fitted with a discharge valve always accessible on the plating of the vessel yes Are the blow off cocks fitted with a spigot and brass covering plate yes
 What pipes are carried through the bunkers none How are they protected "
 Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times yes
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges yes
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock before launching
 Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from Upper deck.

BOILERS, &c.—

Number of Boilers two Description Cylindrical double ended Multitubular
 Working Pressure 90 lbs. Tested by hydraulic pressure to 140 lbs. Date of test 4.5.82
 Description of superheating apparatus or steam chest Horizontal
 Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately no.
 No. of square feet of fire grate surface in each boiler 111 Description of safety valves direct spring
 No. to each boiler two area of each valve 28.24" Are they fitted with easing gear yes
 No. of safety valves to superheater " area of each valve " are they fitted with easing gear "
 Smallest distance between boilers and bunkers or woodwork 8"
 Diameter of boilers 13' 2 1/2" Length of boilers 15' 11 1/2" description of riveting of shell long. seams buttl. lap joint circum. seams double. lap joint
 Thickness of shell plates 1 5/16" diameter of rivet holes 1 3/16" whether punched or drilled drilled pitch of rivets 3 3/4" Ci. 4 1/2" long.
 Lap of plating 5 1/4" Ci. 8 1/2" long. percentage of strength of longitudinal joint 43.6 working pressure of shell by rules 75 lbs.
 Size of manholes in shell 17" x 13" size of compensating rings 33" x 30" x 1/8"
 No. of Furnaces in each boiler two outside diameter 3' 3" length, top 6' 0" bottom 7' 10"
 Thickness of plates 1/2" description of joint double butt if rings are fitted T. joints greatest length between rings 6' 6"
 Working pressure of furnace by the rules 80 lbs.
 Combustion chamber plating, thickness, sides 1/2" back through top 1/2"
 Pitch of stays to ditto " sides 9" x 8" back " top Under 3' 10" x 4" x 1" plates 9" x 8"
 If stays are fitted with nuts or riveted heads Nuts. working pressure of plating by rules 95 lbs.
 Diameter of stays at smallest part 1 1/4" working pressure of ditto by rules 91 lbs.
 End plates in steam space, thickness 1 3/16" pitch of stays to ditto 17" x 17" how stays are secured D. Nut Washers
 Working pressure by rules 93 lbs. diameter of stays at smallest part 2 1/4" working pressure by rules 82 lbs.
 Front plates at bottom, thickness 3/4" Back plates, thickness " greatest pitch of stays " working pressure by rules "

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Diameter of tubes 3" pitch of tubes 4 1/2" thickness of tube plates, front 7/16" back 7/16"
How stayed Stay tubes pitch of stays 13 1/4" x 14" width of water spaces 6"
Diameter of Superheater or Steam chest 31 3/4" length 21'0"
Thickness of plates 1/2" description of longitudinal joint double lap diameter of rivet holes 7/8" pitch of rivets 3 1/4"
Working pressure of shell by rules 144 lbs. Diameter of flue " thickness of plates "
If stiffened with rings " distance between rings " Working pressure by rules "
End plates of superheater, or steam chest; thickness 1/2" How stayed dished 3'6" radius
Superheater or steam chest; how connected to boiler flanged throat united to shell
DONKEY BOILER— Description Vertical Internal cone & erect tubes of shell.
Made at Dumbarton By whom made Denny & Co. when made 1882
Where fixed Spar deck working pressure 40 lbs. Tested by hydraulic pressure to 140 lbs. No. of Certificate 441
Fire grate area 13.5 sq. ft. Description of safety valves direct spring No. of safety valves one. area of each 4.088
If fitted with easing gear yes If steam from main boilers can enter the donkey boiler no.
Diameter of donkey boiler 5'6 1/4" Height 11'2 1/4" description of riveting double & single lap joint
thickness of shell plates 3/8" diameter of rivet holes 13/16" whether punched or drilled drilled
pitch of rivets 3 1/4" lap of plating 4 1/4" per centage of strength of joint 45
thickness of crown plates 1/2" stayed by 4 rod stays 2 7/8" dia.
Diameter of furnace, top 4'2 1/2" bottom 4'6 1/2" length of furnace "
thickness of plates 7/16" description of joint Single united lap joint
thickness of furnace crown plates 7/16" stayed by 4 rod stays 2 7/8" dia
Working pressure of shell by rules 94 lbs. working pressure of furnace by rules 45 lbs
diameter of uptake 16" thickness of plates 3/8" thickness of water tubes 3/8"

The foregoing is a correct description,
Denny & Co. Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. The above engines and
boilers have been built under special survey. The workman
is good, and these being now in good and safe working
condition, are in my opinion eligible to be noted in
the Register Book. "LLOYD'S L.C." 4. 82.

This submitted that this vessel is
eligible to have the notification
sent by D. M.C. recorded
RM 7/7/82

The amount of Entry Fee £ 3 : 0 : 0 received by me,
Special £ 34 : 12 : 0
Certificate (if required) .. £ 0 : 0 : 0 4/4/1882
To be sent as per margin. £ 39 : 12 : 0
(Travelling Expenses, if any, £)

Committee's Minute

Friday, 7th July, 18 82.

Wm. Brownlie
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Charles District
Lloyd's Register
Foundation